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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,181	12/30/2003	Ralph T. Hocter	130897	9961
41838	7590	09/01/2005	EXAMINER	
GENERAL ELECTRIC COMPANY (PCPI) C/O FLETCHER YODER P. O. BOX 692289 HOUSTON, TX 77269-2289			JAWORSKI, FRANCIS J	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/749,181

Applicant(s)

HOCTOR ET AL.

Examiner

Jaworski Francis J.

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7, 9, 10, 12, 13, 16-22, 24-27, 29, 30, 32, 33, 36-41, 43-46, 48 and 49 is/are rejected.
- 7) ☒ Claim(s) 3, 8, 11, 14, 15, 23, 28, 31, 34, 35, 42 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12-30-03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-5, 9-10, 18, 24-25, 29-30, 38, 43-44 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Habu et al (US6176832) which teaches a blood pressure monitoring method and system including transmitting beams of ultrasound energy from ultrasound transducer array groups 4a,4b under processor control and acquiring acoustic data concerning artery 2, estimating the artery diameter based upon data from the transducer groups and calculating the lumen area therefrom as well as estimating the velocity of the pulse wave therefrom, see col. 5 lines 20-35 as exemplary, and computing the blood pressure as a function thereof.

With respect to claims 4,24, 38, 43 Habu et al in col. 9 lines 3-40 teaches correction for noise and incident angle which would include aberrant reflections by thresholding to isolate the valid pulse wave signal.

With respect to claims 5, 25, 44 the time change of vessel wall behaviour is analyzed in Habu et al, see col. 5 lines 17-19.

With respect to claims 9 and 10, 29 and 30 Habu et al cols. 4-5 bridging teaches gradient edge detection of the arterial walls.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al in view of Asmar(US6511436) . The former notes in col. 8 lines 41-53 that any defined physiologic pressure may serve as a cuff (manschette) type reference, whereupon it would have been obvious in view of Asmar col. 13 table 2 that mean blood pressure may have value in serving as a reference during studies of vascular pressure pathologies.

Claims 5-7, 25-27, 39-41 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al as applied to claim1 above, and further in view of Katakura (US5535747) since if the former be considered to be deficient regarding time-

variant analysis the latter in col. 5 teaches that correlation of the arterial wall motion traces may be used over time in order to track pulse wave velocity using Doppler techniques.

Claims 12 and 13, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al as applied to claims 9, 1 above, and further in view of Benthin et al (US4660564) since the latter teaches that artery location may be tracked in order to perform pulse wave velocity measurements using a single scanline beam for each tracking location.

Claims 16 –17, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al as applied to claim 1 above, and further in view of Briskin (US4530363) since whereas the former is silent as to annular or beamformed apertures it would have been obvious in view of the latter to use such since this allows B-mode and Doppler to be practiced to identify flow with accurate focusing on the vessel.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al as applied to claim 18 above, and further in view of Mault (Pre-grant Publ. US2002/0103435) which teaches that a micromachined transducer and its electronics may be incorporated into an adhesive device for monitoring across the skin as in the former, see paras [0031-32].

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Habu et al in view of Okada et al (US6673020) since whereas the former operates at two scanplane measurement sites, it would have been obvious in view of the latter to adjust the steering of the M-mode through the centerline in view of Fig. 12 e.g. Steps S107,

Art Unit: 3737

110 in order to track a true diameter since the latter technique is stated to be applicable to such specific measurements.


***Allowable Subject Matter***

Claims 3, 8, 11, 14-15, 23, 28, 31, 34-35, 42, 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

08312005

  
Francis J. Jaworski  
Primary Examiner